

Core dump points to **B**, showing that lock is NULL, but not why, nor where it should be initialized. In a correct run, Thread 1 initializes the lock at **A**.

Thread 1

```
void hts_mutexinit(htsmutex* mutex) {  
    htsmutex_s* smutex = malloc(sizeof(htsmutex_s));  
    pthread_mutex_init(&smutex, 0);  
    A *mutex = smutex;  
}
```

Bug: Assignment should precede hts_mutexlock() call. Code does not enforce this ordering.

Thread 2

```
int hts_cancel_file_push(...) {  
    int ret;  
    hts_mutexlock(&opt->state.lock); B  
    ret = hts_cancel_file_push_(opt, url);  
    hts_mutexrelease(&opt->state.lock);  
    return ret; }
```

Non-Failing Run Memory Image @ **B**

&opt->state.lock = <valid mutex state>

Failing Run Core dump @ **B**

&opt->state.lock = <garbage data> or NULL